

Fig. 1 The proposed biotransformation pathways of PPD type ginsenosides by glycosidases.

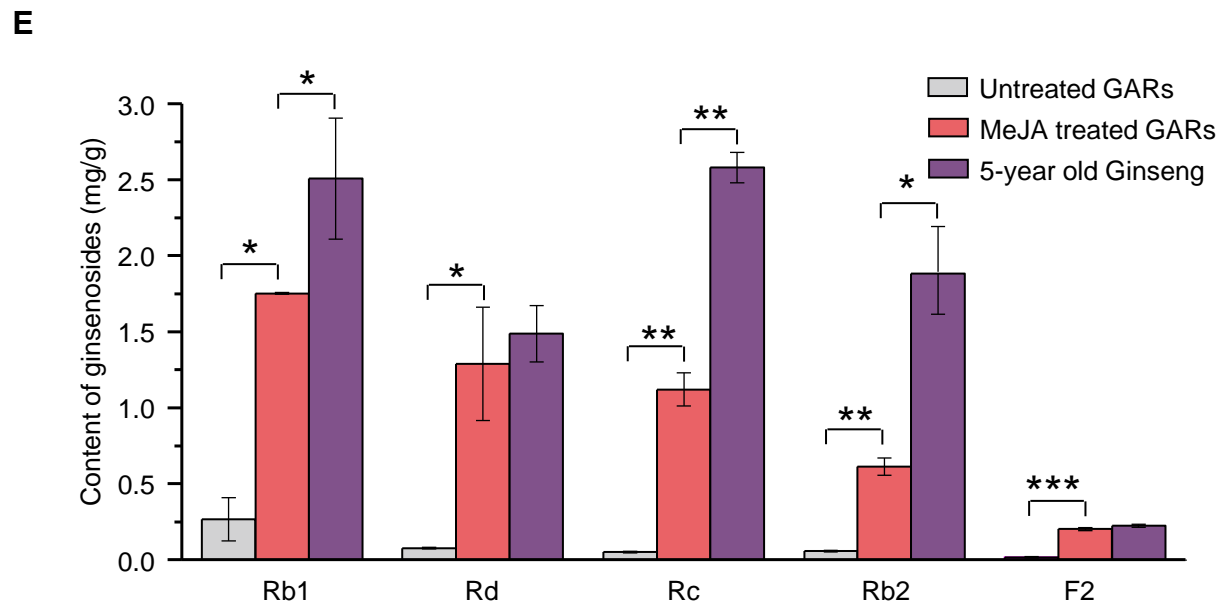
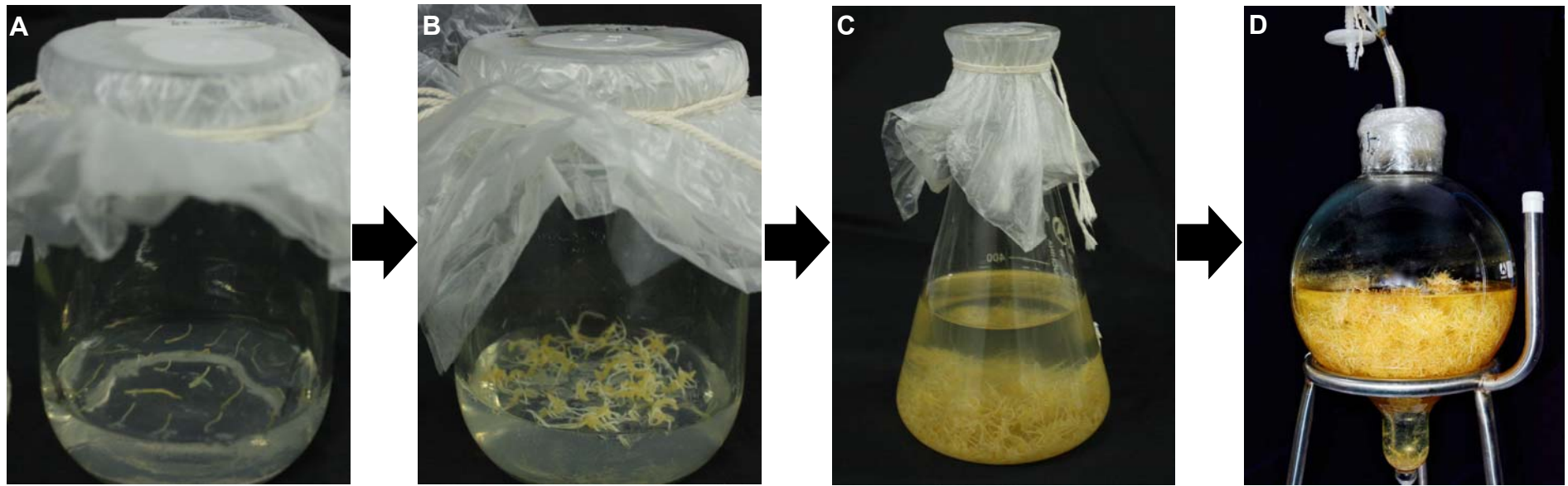


Fig. 2 Efficient production of ginsenosides by culture of ginseng adventitious roots in a bioreactor.

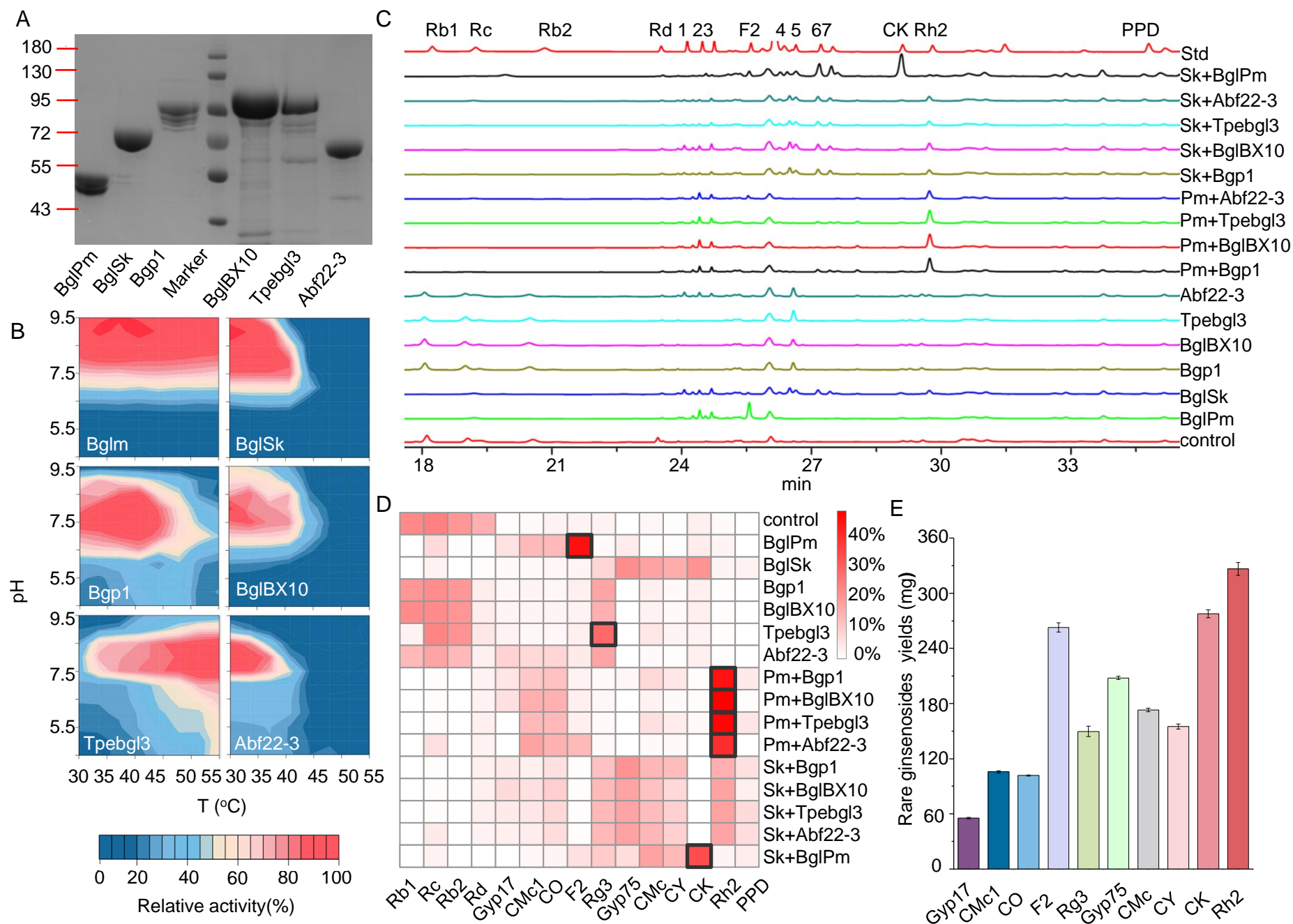
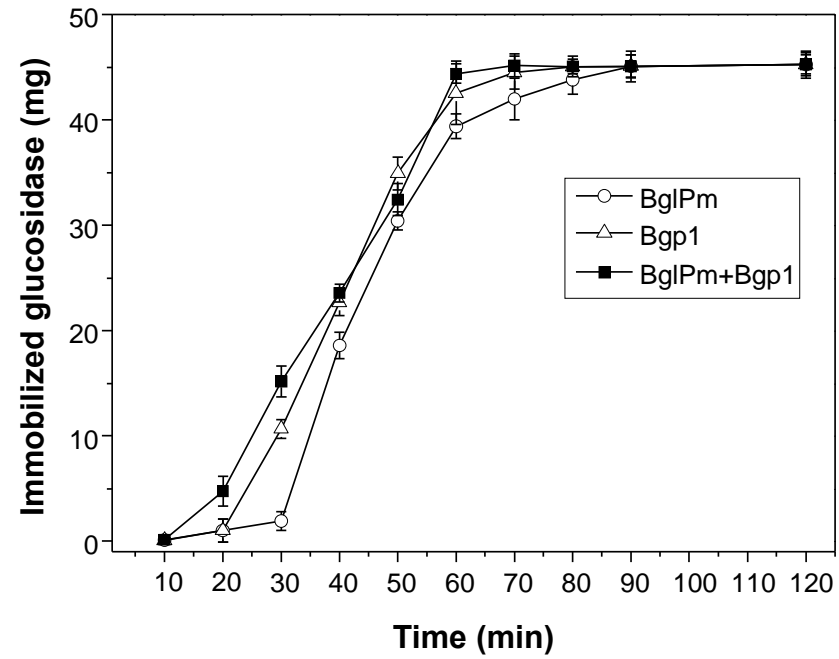


Fig. 3 Expression, screening, and biotransformation of glycosidases.

A



B

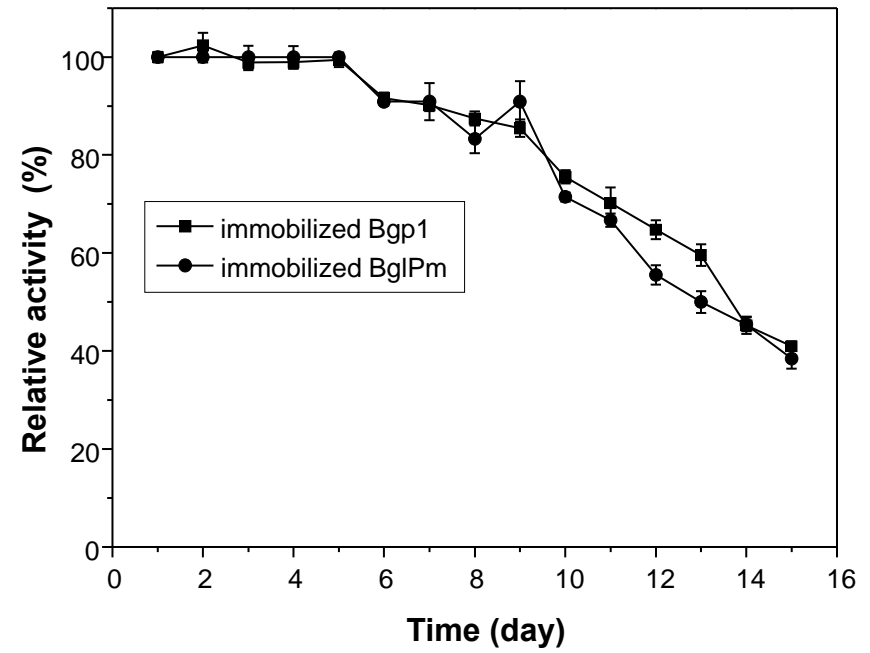


Fig. 4 Loading efficiency and thermal stabilities of immobilized β -glucosidase.

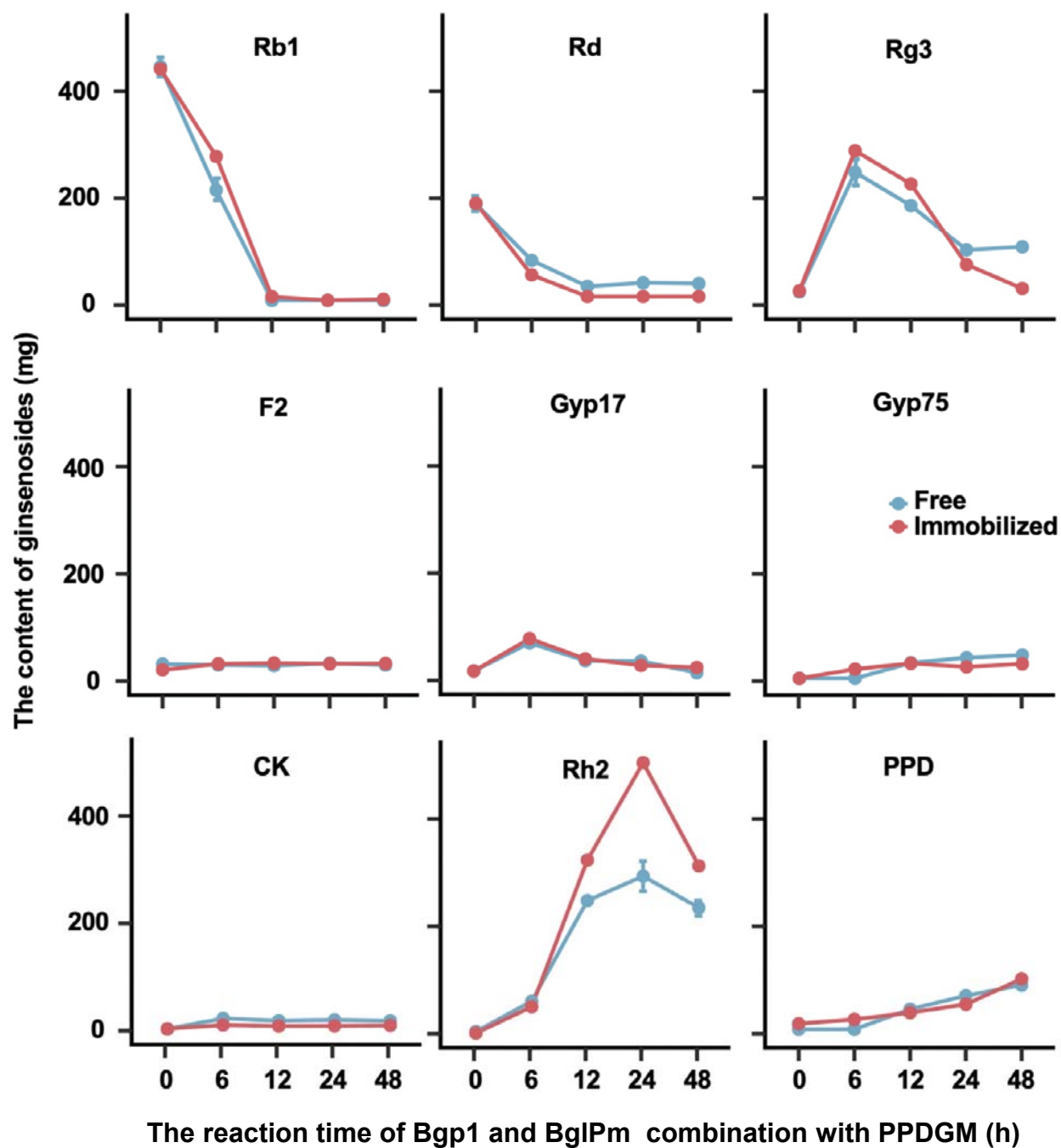


Fig. 5 UPLC results of transformation of PPDGM by β -glucosidases Bgp1 and BglPm combination.

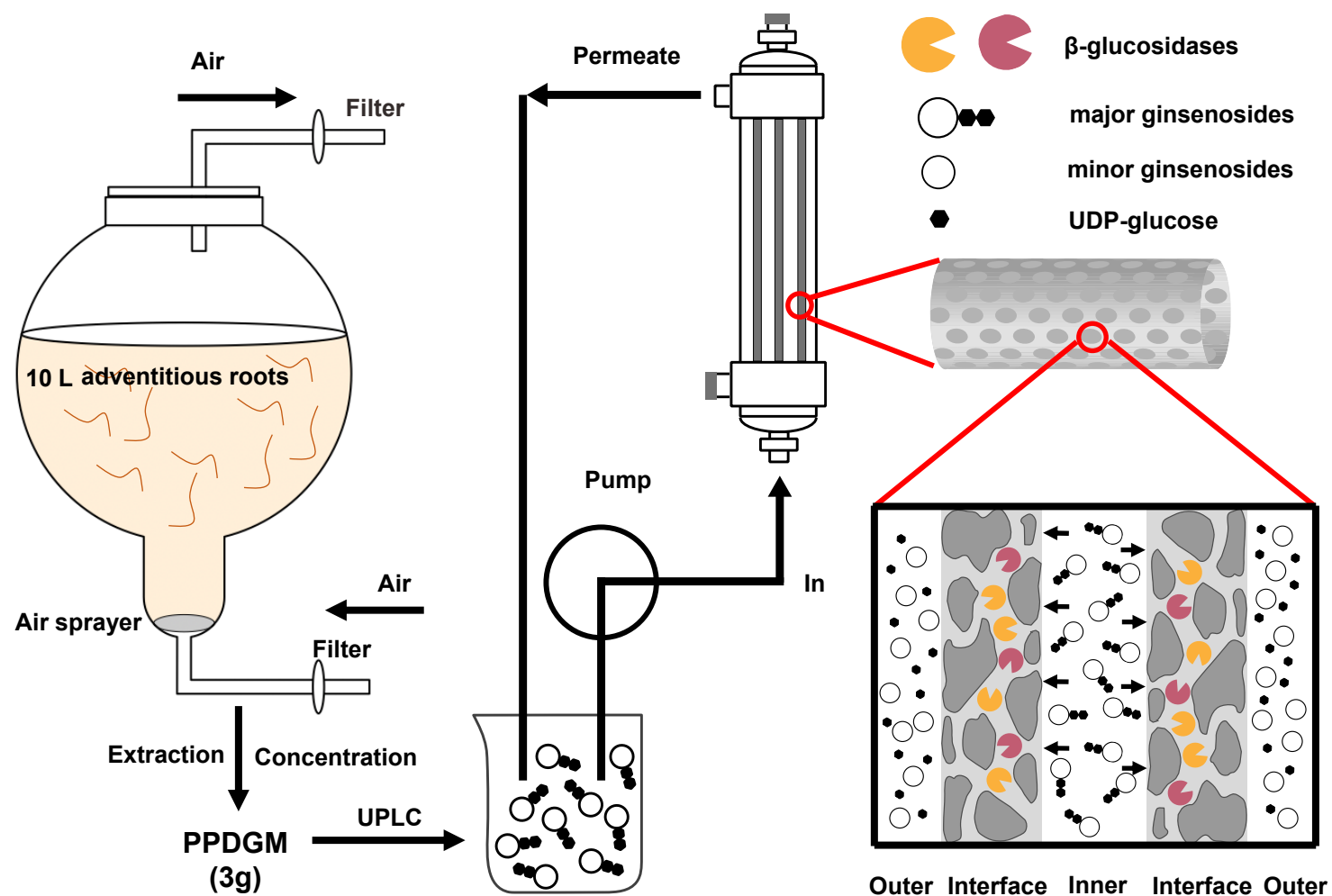


Fig. 6 Schematic diagram of rare ginsenosides biotransformation system.